



Borough of Middleton.

ANNUAL REPORT

ON THE

HEALTH OF THE BOROUGH

FOR THE

YEAR ENDING DECEMBER 31st, 1921,

BY

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Middleton,

June, 1921.

To the Chairman and Members of the Health Committee.

Mr. Chairman and Gentlemen,—

I have the honour to present my Annual Report on the Vital Statistics and Sanitary circumstances of the Borough of Middleton for the year 1920.

The birth-rate shows a notable improvement, being 22.6 per thousand of the population, as compared with 14.0 in 1919; and the infantile mortality rate, though 14 per 1,000 births higher than last year, is 16 lower than the average of the last 10 years.

The general death-rate of the town is 12.3, which is lower than the corresponding figures for 1919 and for the mean of the last 10 years.

A serious outbreak of Smallpox in the Autumn was the outstanding feature of the year. Happily, it was attended by no loss of life, but it occasioned considerable interference with the school attendance and the social activities of the Borough, and it placed an additional burden on the ratepayers.

In connection with this outbreak I wish to acknowledge the very great assistance which I received from Mr. Councillor F. Monk, Chairman of the Health Committee, whose efforts, day by day, throughout the whole of the epidemic were untiring.

My best thanks I offer to him and to Mr. Alderman Wiggins and Mr. Alderman Bentley, who were concerned with the financial aspect of the campaign.

The strain and anxiety to which a Medical Officer of Health is subjected during such an outbreak cannot be realised by those who have not gone through a similar experience; but the support given by the Chairman and other members will remain as pleasant memories of a period of very real anxiety.

Finally, I desire to thank my fellow officials for the ready assistance which they have rendered me on many occasions.

ALFRED BALL.

NATURAL AND SOCIAL CONDITIONS OF THE DISTRICT.

Population (Census 1911)	27,983
Population (estimated by the Registrar General, 1920)	28,820

PHYSICAL FEATURES OF THE DISTRICT.

The Borough is hilly, and the heights above ordnance datum vary considerably in different parts, the greatest elevation being found in the north where it reaches 600 feet.

The soil consists of clay with local outcrops of gravel and sand.

The river Irk, which is joined by the streams known as Wince Brook and Whit Brook, runs through the Borough, and takes the surface water.

CHIEF OCCUPATIONS.

Middleton is largely interested in the Cotton Industry. The principal industries are cotton spinning and weaving, calico bleaching, and dyeing, bleaching and finishing of cotton yarn and cloth.

There are 75 farms in the Borough, mainly in the out-lying parts, and in consequence this part of the population is concerned in agriculture.

Nevertheless, the majority of the working classes is engaged in the mills, in which many women and children are employed. The "half-time" system, which is a feature of the Lancashire industrial towns, shows no signs of diminishing popularity; many of the children thus engaged state

that they prefer it to full time at school, and the parents find that the additional money which accrues outweighs any considerations of education.

Many of the workers in the mills live in adjoining districts, and come into the Borough daily to their work.

HOSPITAL FACILITIES.

The splendid Hospitals situated in Manchester, Oldham, Rochdale, and other neighbouring towns are within reach of the inhabitants of Middleton, and afford accommodation and treatment for all forms of disease and disability.

POOR LAW RELIEF.

The amount expended on Poor Law Relief (Outdoor) during the year ended 31st March, 1921, was £754 8s. 10d., and the number of persons so relieved was 166.

The following are the six wards into which the Borough is divided, together with their acreage and population, as shown by the Census of 1911:—

	Acreage.	Populaton.
North Ward	1835	4359
South Ward	677	4674
West Ward	1197	3829
Central Ward	134	4377
East Ward	494	5683
Parkfield Ward	404	5061
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Totals ...	4741	27983
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Rateable value of the Borough, 1920-1921, £148,436.

Consolidated Rate, 8s. in the £.

Poor Rate, 6s. 6d. in the £.

VITAL STATISTICS.

The following figures and tables are based partly on information as to certified births and deaths obtained locally, and partly on tables furnished by the Registrar General:—

Births.—During the year 336 males and 318 females were born, of whom 328 males and 312 females were legitimate, and 8 males and 6 females illegitimate.

The birth-rate was 22.6 per thousand of the population, compared with 14.0 during 1919.

The mean birth-rate for the 10 years, 1910-1919, was 18.4.

Thus during the year 1920 there was an increase in the rate of 8.6 per 1,000 inhabitants, and the rate is 4.2 per 1,000 above the average for the last 10 years.

Infantile Mortality.—Of babies under 1 year of age 34 boys and 25 girls (including 4 illegitimate boys and 3 illegitimate girls) died during the year. The rate of deaths under 1 year per 1,000 births was thus 90; the corresponding figure for 1919 was 76; and for the mean of the 10 years 1909-1918 it was 106.

The following table compares the Middleton figures with those of England and Wales, and with those of the 148 smaller towns, among which Middleton is included:—

	Birth-rate per 1,000 population.	Infantile Mortality Rate.
England and Wales	25.4	80
148 Smaller Towns	24.9	80
Middleton	22.6	90

Ward distribution of Births and Deaths under 1 year:—

Wards.	No. of Births.	No. of Deaths.	per 1000 Births	Death Rate
North	74	5	.....	70
Central	100	7	.....	70
South	104	6	.....	57
East	149	15	.....	100
Parkfield	119	16	.....	134
West	97	10	.....	103
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
Total ...	640	59		

640 births were registered in Middleton during the year; the total number given in the Registrar General's table is 654, the difference being accounted for by transferable births.

Of the 59 deaths under 1 year, 52 were registered in the Borough, and 7 were transferred deaths.

Deaths Under 1 Year of Age.

Causes.	Under 1 week	1-4 weeks	1-2 months	2-3	3-6	6-9	9-12	Total
Atelectasis	3	...	...	...	...	...	...	3
Premature Birth	6	1	2	...	...	...	...	9
Diarrhoea and Enteritis	1	3	4	2	3	...	1	14
Marasmus and Asthenia	2	2	1	1	1	...	...	7
Respiratory Diseases ...	...	2	3	3	2	1	2	13
Whooping Cough .....	...	...	...	...	2	...	...	2
Measles .....	...	...	...	...	2	...	...	2
Convulsions	2	...	...	1	...	...	...	3
Other	1	1	1	...	1	2	...	6
	15	9	11	7	11	3	3	59

Sixteen deaths of children between the ages of 1 and 5 years were registered in the Borough, there being 8 males and 8 females.

Deaths Between 1 and 5 Years of Age.

Causes.	Years 1-2	Years 2-3	Years 3-4	Years 4-5	Total
Respiratory Diseases	2	2	2	2	4
Gastro-enteritis	2	2	2	1	3
Measles	1	...	2	1	2
Diphtheria .....	...	...	1	2	3
Whooping Cough	1	...	1	...	2
Marasmus .....	...	1	...	...	1
Hydrocephalus .....	...	...	1	...	1
	6	3	3	4	16

Deaths.

The number of deaths from all causes assigned to Middleton was 357, consisting of 167 males and 190 females.

The death-rate was 12.3 per 1,000 inhabitants, and the corresponding figure for 1919 was 14, and the mean of the ten years, 1910-1919, was 15.0.

	All causes	Enteric Fever	Measles	Scarlet Fever	Whooping Cough	Diphtheria	Annual Death-rate per 1,000 Civilian Population.
England and Wales	12.4	0.01	0.19	0.04	0.11	0.15	
148 Smaller Towns...	11.3	0.02	0.19	0.03	0.10	0.14	
Middleton	12.3	0.00	0.13	0.03	0.13	0.17	

The epidemic death-rate for the year was 1.00 per 1,000 inhabitants, the deaths including 5 from Diphtheria, 4 from Measles, 15 from Diarrhoea, 4 from Whooping Cough, and 1 from Scarlet Fever. There were no deaths from Small-pox or Typhoid Fever.

Deaths from Cancer and Malignant Disease.

During the year 35 deaths, including 16 males and 19 females, were certified as due to malignant disease.

The rate per thousand was 1.2.

The part affected, together with the age and sex, are shown in the following table:—

Site of Disease.	Age in Years.				
	40-45	45-65	65 and upwards		
	F	M	F	M	F
Jaw	1	...	...	...
Larynx	1	...	...	...
Oesophagus	2	...	...	...
Stomach	1	2	1	...	...
Intestines	1	1	1
Rectum	1	1	...	...
Bladder	1
Pancreas	2	...	...	...
Liver	2	1	...	...
Breast	3	...	1
Uterus	1	...	3	...	1
Ovary	1	...	...
Prostate	2	...	...	...
Scrotum	1	...	...	...
Ribs	1	...	...	...
Abdomen	5	...	1
	2	15	11	1	5

Also one infant aged 19 days died of Congenital Tumour of the Kidney.

Longevity.

Of the total deaths, 101 were those of persons 65 years and over. There were 65 who were between 70 and 80, 14 between 80 and 90, and one over 90 years of age. Fifteen of these old people died in institutions outside the Borough.

Inquests.

There were 19 inquests and 8 inquiries by the Coroner. Nine of the inquests were held outside the Borough on the deaths of persons resident in the Borough.

The causes of death were as follows:—

Natural Causes	14
Accident	8
Suicide	5

The ages of the individuals who were the subject of inquest or inquiry were:—

	Inquest.	Inquiry.
Under 1 year .....	...	2
1—5 years .....	...	...
5—15 years	1	...
15—25 years	1	...
25—45 years	5	2
45—65 years	7	...
65 and over	5	4

Deaths.

Causes of Death in Middleton Borough, 1919.

Civilians only.

		Males.	Females.
1	Enteric Fever .....	...	...
2	Smallpox .....	...	...
3	Measles	4	...
4	Scarlet Fever .....	...	1
5	Whooping Cough	1	3
6	Diphtheria and Croup	1	4
7	Influenza .....	...	1
8	Erysipelas .....	...	1
9	Pulmonary Tuberculosis	15	19
10	Tuberculous Meningitis .....	...	...
11	Other Tuberculous Diseases .....	...	2
12	Cancer, Malignant disease	16	19
13	Rheumatic Fever	1	4
14	Meningitis .....	...	...
15	Organic Heart Disease	18	28
16	Bronchitis	28	22
17	Pneumonia (all forms)	14	10
18	Other Respiratory Disease .....	...	1
19	Diarrhoea (under 2 years)	11	4
20	Appendicitis	2	1
21	Cirrhosis of Liver	1	...
21a	Alcoholism .....	...	1
22	Nephritis and Bright's Disease ...	5	3
23	Puerperal Fever .....	...	...
24	Parturition .....	...	2
25	Congenital Debility	12	8
26	Violence (apart from suicide)	5	3
27	Suicide	3	2
28	Other Defined Diseases	29	50
29	Causes illdefined or unknown	1	1
Total—All Causes ...		167	190

SANITARY CIRCUMSTANCES OF THE BOROUGH.

Water Supply.—The Heywood and Middleton Water Board furnish a constant supply of water which is of sufficient quantity and good quality. The catchment area contains 2630 acres and is moorland. The hardness of the water is of a low degree.

This water is supplied to all parts of the Borough with the exception of a small area in the north and some isolated dwellings, mainly farms, which derive their water from wells.

RIVERS AND STREAMS.

The river Irk, with its tributaries the Wince Brook and the Whit Brook, flows through the district.

There have been complaints as to offensive smells emanating from the Wince Brook, and it is probable that pollution has occurred before this stream reaches the Borough.

During the year it was found that five houses in Oswald Street and two shops in Manchester Old Road were draining directly into the river. This has been remedied by all these premises being connected to the sewerage system.

Alterations have been made to Greengate Street storm overflow, Wood Street storm overflow, and Bridge Street storm overflow, to prevent sewage gaining access to the streams in the Borough.

DRAINAGE AND SEWAGE.

Surface water is drained into the streams.

The more populous parts of the Borough, which are urban in character, are sewered throughout, as is also the village of Rhodes in the west.

This sewage is admitted into the Manchester system of sewers, and is disposed of by that Corporation under the terms of an agreement entered into in the year 1915. From a small area in the southern part of the Borough the sewage is led into a separating tank or cesspool, the effluent from which is allowed to flow into an adjoining stream.

In the north-west and north of the Borough, which is rural, there is no public system of sewers, and the sanitary conveniences for the dwellings consist of pail closets.

CLOSET ACCOMMODATION.

During the year twenty-three pail closets in various parts of the town were converted to water closets (including 22 to fresh water and 1 to waste water), and in addition three other pail closets were abolished.

The numbers of each type of closet are as follows:—

Fresh water closets	2250
Waste water closets	3640
Pail closets	402

SCAVENGING.

The cleansing of earth closets and privies at the farms is carried out by the occupier.

The removal of night soil from the rural localities which are not sewer'd is undertaken by the Corporation.

The numbers of sanitary receptacles of different types in the Borough are as follows:—

Brick Ashpits	1767
Portable Bins	1457
Quine's Wall Bins	570

The Corporation remove house refuse by means of two motor dust waggons and also horse-drawn carts, to the Refuse Destructor, where it is picked over, the glass and tins being removed and the remainder destroyed by burning.

The steam generated in the Destructor works boiler has until recently been utilized by the Electricity Department, but now owing to a re-arrangement that department has finally ceased to take the steam.

During the year other methods of dealing with house refuse have been considered by the Health Committee, but it has been decided to adhere to the use of the Destructor which is the best method from the point of view of the health of the general public.

Mention may here be made of the so-called "Salvage method" for dealing with House Refuse, which is really an old process revived under a new name.

It involves the conservation of refuse which ought rather to be destroyed as speedily as possible and the accumulation of quantities of decaying refuse tends to provide breeding places for flies and rats.

The erection and use of a Salvage plant is, in effect, the establishment of an Offensive Trade by the Local Authority.

It involves fresh expenditure on site, equipment, and staff, and therefore the chief aim being to show success on the financial side, the question of the Public Health will tend to recede to the background.

The value of a municipal Destructor is quite evident when Infectious Diseases are prevalent, but apart from that there will always be material which should be destroyed by fire.

SANITARY INSPECTION OF THE DISTRICT.

The following is a summary of the work done during the year. A more detailed account will be found in Mr. Norton's report :—

Preliminary Notices served	422
Formal (Statutory) Notices	30
Formal Notices complied with	23
Summoned for non-compliance	3
Number of visits to Slaughter-houses	319
Number of visits to Farms, Dairies, and Milkshops ...	117
Number of visits to Lodging-houses	480
Number of visits to Factories	57
Number of visits to Workshops	108
Number of Smoke Observations	73
Number of Nuisances Abated	393

PREMISES AND OCCUPATIONS CONTROLLED BY BY-LAWS OR REGULATIONS.

Slaughter-houses.—Of the 10 slaughter-houses in the Borough, 3 are registered and 7 are licensed. They have been found to be in a satisfactory condition on the numerous occasions on which they have been visited.

Bakehouses.—There are 15 bakehouses, which have been regularly visited, and no action has required to be taken.

Common Lodging-houses.—There are five Common Lodging-houses registered in the Borough; they have been visited frequently, and have been generally found in a fairly satisfactory condition.

Offensive Trades. None are now carried on in the district.

Schools.—The sanitary condition and water supply of the schools were maintained as in the past.

Information was given by the Head Teachers of the absence from school through illness of the children, and where necessary these were visited and reported on by the School Nurse. Children suffering from Infectious Diseases or living in houses in which such diseases were being nursed were excluded from school for appropriate periods.

Owing to an outbreak of Smallpox all the Elementary Schools, also the Secondary School, in the Borough were closed in October, and remained closed until the end of the year.

FOOD.

(a) Milk Supply.

Most of the milk is supplied by farmers within the Borough from their own farms direct to their customers.

There is a sufficiency in quantity available to consumers who are willing to pay the prices demanded, which are not in keeping with the quality of the article supplied.

Much resentment has been expressed in the Borough at the high price of milk, and probably for this reason the amount used in many households has been restricted as far as possible.

During the month of May the Food Committee found it necessary to arrange for milk from outside sources to be brought into the Borough. It was possible to retail this milk at a cheaper price than that at which the milk produced locally was being sold, even though the imported milk had to bear the cost of transport by railway.

Quality of the milk. Samples of milk have been taken and sent for analysis to the Public Analyst, and further details may be found in another part of this report.

It may be mentioned here that cows' milk is generally held in such low repute as a food for infants, that in those instances in which mothers are feeding their babies artificially (i.e., not on breast milk) it is exceptional to find that cows' milk is being used. Dried milk or condensed milk is found to be far better for the babies.

Milk (Mothers and Children) Order, 1918.

This order, made by the Food Controller, gave any local authority within the meaning of the Notification of Births Act, 1907, the power to arrange for the supply of food and milk for expectant and nursing mothers, and of milk for children under five years of age; the expenses to be defrayed as under the above Act.

Careful inquiries have been made by the Health Visitor when visiting the homes in connection with the notification of births, and reports submitted in those cases where it was found that owing to the excessive cost of milk an insufficient quantity was available for the children. Wherever necessary a supply of milk has been ordered free, or at a reduced cost, for the children or for the mother where the baby was being breast-fed.

(b) Meat.

The amount of meat surrendered as unfit for human consumption was as follows:—

Tuberculous carcases and parts: two whole carcases and two parts, amounting to 1,049 lbs., were destroyed.

No diseased, unsound or unwholesome meat has been seized during the year.

The above-mentioned meat was surrendered voluntarily, and no legal proceedings were instituted.

There is no Public Abattoir in Middleton.

The Sanitary Inspector pays frequent visits to the Slaughter-houses, especially at hours when he knows that slaughtering will be in progress. The butchers give every assistance to inspection, and whenever they encounter some abnormal condition they always ask for an opinion.

Statement in tabular form of the number of Slaughter-houses in use in the Borough at the dates mentioned:—

	In 1914.	In Dec., 1920.
Registered	3	3
Licensed	7	7

During the period of war in which the sale of meat was controlled 3 only of the Slaughter-houses were in use.

(c) **Bakehouses.**—All the Bakehouses have been regularly visited.

(d) No cases of food poisoning have been reported in the district.

PREVALENCE OF AND CONTROL OVER INFECTIOUS DISEASES.

The following table shows the number of notifications of the different diseases received during the year:—

Smallpox	81
Scarlet Fever	47
Diphtheria	41
Enteric Fever	1

Erysipelas	5
Purperal Fever	0
Ophthalmia Neonatorum	10
Pulmonary Tuberculosis	33
Tuberculosis—Other Forms	9
Cerebro-spinal Fever	1
Encephalitis Lethargica	0
Pneumonia	24
Malaria (recurrent, acquired abroad)	2
Dysentery	0
Trench Fever	0
Anthrax	0
Rabies	0
*Chickenpox	18

* Made compulsorily notifiable during the Smallpox outbreak.

SCARLET FEVER.

Month.	Total	Wards.						Age Incidence.				Removed to Hospital.
		N.	C.	S.	E.	P.	W.	1-5	5-15	15-25	25	
January	5	2	...	...	1	1	1	...	4	1	...	2
Feb.	1	...	...	...	...	1	...	...	1	...	...	...
March	2	2	...	...	...	...	...	...	1	1	...	1
April	2	2	...	...	...	...	...	...	2	...	...	1
May	4	...	1	...	3	...	...	1	3	...	...	1
June	...	...	...	...	...	...	...	...	1	...	...	...
July	2	...	1	...	...	...	1	1	1	...	...	1
August	...	...	...	...	...	...	...	...	...	...	...	...
Sep.	4	...	1	...	3	...	...	1	2	1	...	3
Oct.	10	2	1	3	1	3	...	...	5	4	1	1
Nov.	12	...	3	4	1	3	1	...	3	7	2	1
Dec.	5	...	1	2	2	...	...	4	1	...	...	1
	47	8	7	8	11	10	3	3	26	15	3	12

Of the above 23 were males and 24 females.

There was one fatal case, a female aged 5. Two cases occurred in one house, but all the others in different houses.

The schools attended by the affected children were:—

Durnford Street	8	Outside the Borough ...	1
Parish	2	Bowlee	1
Parkfield	2	Elm Street	4
St. Peter's	2	St. Gabriel's.....	2
Tonge	1	Rhodes	1

DIPHTHERIA.

Month.	Total	Wards.					Age incidence.			Removed to Hospital
		N.	C.	S.	E.	P.	W.	1-5	5-15	
January	2	...	...	2	...	...	...	...	1	1
February	2	1	...	...	1	...	...	1	1	...
March	5	...	1	...	1	...	3	1	4	...
April	4	...	...	...	2	1	1	3	1	...
May	3	...	1	...	...	...	2	1	2	...
June	2	...	1	...	1	...	...	1	...	1
July	3	...	2	1	...	...	...	1	2	...
August	4	2	2	...	...	...	...	...	4	...
September	1	...	...	1	...	...	...	...	1	...
October	8	2	2	...	4	...	...	...	7	1
November	5	...	1	2	1	1	...	2	3	...
December	2	...	...	2	...	...	...	2	...	1
	41	5	10	8	10	2	6	12	26	3
										17

Sex distribution: 17 males and 24 females.

There were five deaths, one male and four females. Ages 3, 4, 4, 6, and 8. Death-rate, 0.17 per 1,000 inhabitants. During the Smallpox outbreak only the most urgent cases of Diphtheria were removed to Hospital.

The schools attended by the affected children were:—

Durnford Street	8	Rhodes	3
Parish	2	St. Gabriel's.....	1
Thornham	1	Fonge	3
Trinity	1	Outside the Borough ...	2
Elm Street	3		

A supply of diphtheria antitoxin is kept in this office, and is available for the use of medical practitioners, by whom it is used in most cases.

Sixty-six tubes of serum were supplied during the year.

ENTERIC FEVER.

One case of this disease, a male, aged 22, was reported in Parkfield Ward in May.

The patient was removed to hospital and recovered from the disease. This man had come to live in Middleton a few days before (within the incubation period of the disease) and therefore should not be considered as a case occurring in the Borough.

ERYSIPelas.

Five cases were notified during the year; and one other, a female, aged 79, died in a hospital outside the Borough.

PUERPERAL FEVER.

No cases of this disease were notified during the year.

OPHTHALMIA NEONATORUM.

Ten notifications of Ophthalmia were received, 8 being from general practitioners and 2 from hospitals to which the babies had been taken.

The wards in which the babies were born were:—

One in North, one in Central, two in East, 3 in Parkfield, one in South, and one in West Ward.

Of the 10 children one died in hospital of Gastro-enteritis, and at the end of the year in the other nine cases the condition had cleared up, leaving no impairment.

MALARIA, DYSENTERY, ETC.

Under Regulations of 7th January, 1919, pneumonia, malaria, dysentery, and trench fever, became compulsorily notifiable. 24 cases of pneumonia and 2 cases of recurrent malaria were notified. All were under medical treatment at the time of notification.

CEREBRO-SPINAL FEVER.

One person was notified as being a possible case of this disease, but further observation showed that it was a case of spinal disease, probably caused through thrombosis. The patient, a male of 53 years, recovered. No bacteriological examination was made.

SMALLPOX.

Notifications of 81 cases of smallpox were received, and a special report on this outbreak is included in this volume.

Vaccinations and re-vaccinations have been performed through the Medical Officer of Health under the Public Health (Smallpox Prevention) Regulations, 1917.

NON-NOTIFIABLE INFECTIOUS DISEASES.

The following cases have been reported, chiefly by Head Teachers. All have been visited by the School Nurse:—

Whooping Cough	68 cases
Mumps	174 cases
Chickenpox	60 cases

Chickenpox was made compulsorily notifiable from 6th November. Eighteen cases were notified in addition to the above.

MEASLES.

Information was received of 293 cases during the year, almost all occurring in the first three months.

276 cases were reported amongst school children either by Head Teachers, or through the visits of the School Nurse and Health Visitor. In addition, 8 cases were notified by medical practitioners and 9 by parents.

There were 149 males and 144 females.

The fatal cases numbered 4—all males, whose ages were: two under 1 year, one aged 1, and one aged 4.

The death-rate was 0.13.

Month.	Total	Wards.					Age incidence.			
		N.	C.	S.	E.	P.	W.	Under 1	1-5	5-15
January	74	1	2	13	30	28	...	...	32	42
February	120	1	8	52	36	20	3	...	33	87
March	91	8	6	3	38	6	30	4	34	53
April	1	1	...	...	...	...	...	1	...	...
May	1	1	...	...	...	...	...	1	...	...
June	1	...	...	...	...	1	...	...	1	...
July	2	...	1	...	...	1	...	...	...	2
August	2	...	...	...	2	...	...	...	2	...
September	1	...	...	...	1	...	...	...	1	...
October	...	...	...	...	...	...	...	...	...	...
November	...	...	...	...	...	...	...	...	...	...
December	...	...	...	...	...	...	...	...	...	...
	293	12	17	68	107	56	33	6	103	184

DIARRHŒA AND ENTERITIS.

Fifteen deaths—11 male and 4 female—are stated by the Registrar General to have occurred from Diarrhœa and Enteritis in infants under 2 years of age. Death-rate 0.51 per 1,000 inhabitants.

The following table shows the months in which these deaths occurred, also the ward distribution. It will be seen that there was no preponderance in the summer months.

No fatal cases were registered in January, February, March, or May.

Month.	Total	Wards.					
		N.	C.	S.	E.	P.	W.
April	4	...	1	...	2	...	1
May	0	...	...	...	...	...	...
June	1	...	...	...	1	...	...
July	1	1	...	...	...	...	...
August	2	...	1	...	1	...	...
September	1	...	...	...	1	...	...
October	1	...	...	...	...	1	...
November	1	...	...	...	...	1	...
December	2	...	...	...	2	...	...
Transferable	2	...	...	...	...	2	...
	15	1	2	...	7	4	1

TUBERCULOSIS.

Forty-one notifications of all forms of Tuberculosis have been received during the year.

Notifications from	Pulmonary, Other Forms.		
Private Practitioners	22	...	4
School Medical Officer .....	...	...	2
Tuberculosis Officer	10	...	3
Total ...	32	...	9

Of the above, 22 additional notifications have been received from Sanatoria, and 3 others of observation cases. There were two cases, including 1 pulmonary and 1 enteritis, not notified.

Sex Distribution.

	Males.		Females.
Pulmonary	16	...	16
Other Forms	6	...	3

Ages Affected.—Years:

	Under 1	1-5	5-15	15-25	25-45	45-65
Lungs .....	...	...	2	9	14	7
Other Forms	1	3	8	1	4	...

Wards.

	N.	C.	S.	E.	P.	W.
Lungs	7	5	4	3	4	4
Other Forms .....	...	0	1	2	1	1

Other forms of Tuberculosis consisted of: Cervical glands 4, hip 1, skin 1, spine 1, ribs 1, finger 1.

All the notified cases were brought to the notice of Dr. Stewart, the Consultant Tuberculosis Officer for the district, and were visited under his directions.

Forty-seven reports were received from him as to the domiciliary conditions; all defects have been inquired into, and remedied as far as possible.

In the case of all patients who have been sent to a sanatorium or have died, the sleeping room and the bedding have been disinfected through the sanitary department.

Thirty-two notices of the offer of sanatorium treatment have been furnished by Dr. Lissant Cox, Chief Tuberculosis Officer for the County, and 22 notices of admission to, and 32 of discharge from sanatorium, have been received.

Of cases which were notified previously to 1920, 8 have been admitted, and 16 discharged from sanatorium.

I am indebted to Dr. Stewart for the following report, which he has kindly written on the work carried out during the year in connection with the Tuberculosis Dispensary in Middleton.

BOROUGH OF MIDDLETON.

REPORT OF TUBERCULOSIS OFFICER FOR THE YEAR 1920.

During the year 1920, thirty insured patients (new cases) were recommended for treatment. These included nine discharged soldiers. Twenty-four of the cases were pulmonary and six were non-pulmonary.

Of the pulmonary cases, eight were sent to Sanatorium, eight to Hospital for advanced cases, eight were granted Domiciliary treatment only.

Of the non-pulmonary cases, two were sent to Manchester Skin Hospital for treatment, and four to Manchester Royal. In one case a surgical appliance was supplied:

Of the pulmonary cases, nine were in the third stage of the disease when they applied for treatment. Eight of the nine advanced cases died during the year.

Nineteen non-insured patients (new cases) were recommended for treatment. Of these nine were pulmonary, eight non-pulmonary, and two suspects.

Of the nine pulmonary cases, five were sent to Sanatorium, two were sent to Observation Hospital, two were granted Dispensary treatment only.

Two of the cases were in the third stage of the disease when they applied for treatment, and one of these cases died during the year.

Of the eight non-pulmonary cases, two were sent to General Hospital for surgical treatment, and four to Manchester Skin Hospital. In two cases splints and other appliances were provided, and in one case X-ray examination was arranged for.

During the year forty-three patients were discharged from institutions, as follows:—

Manchester Royal Infirmary	8
Ancoats Hospital, Manchester	1
Elswick Sanatorium (Near Blackpool)	4
Aitken Sanatorium (Near Bury)	3
High Carley Sanatorium (Ulverston)	9
Delamere Sanatorium (Cheshire)	1
Meathop Sanatorium (Grange-over-Sands)	3
Leasowe Sanatorium (Wallasey)	1
Eastby Sanatorium (Skipton)	1
Heath Charnock Hospital (Chorley)	1
Ainsworth Hospital (Bury)	1
Westhulme Hospital (Oldham)	1
Marland Hospital (Rochdale)	3
Chadderton Hospital (Oldham)	4
Bury Observation Hospital (Bury)	2
—	
	43
—	

The results on discharge were as follows:—

Disease arrested	4
Disease quiescent	1
Improved	17
Relieved	9
Stationary	9
Died in institution	3
—	
	43
—	

During the year eighty new patients were sent to the Dispensary for diagnosis, etc., by their doctors.

There were seven hundred and twenty-nine re-attendances of old patients for supervision, extensions of treatment, etc.

One hundred and forty-one specimens of sputum, etc., were examined at the Laboratory, with a positive result in forty-four cases, and negative in ninety-seven cases.

The Tuberculosis Health Visitor paid seven hundred and fifty-seven Domiciliary visits during the year. All the cases notified during the year were visited, and may be classified as follows:—

Lungs:

Patients with positive sputum	20
Patients with negative sputum	4
Patients with no sputum	5
Patients in institution when visited	1
Patients dead when visited	3
	—
	33
	—

Non-Pulmonary:

Glands	4
Hip-joint	1
Spine	1
Skin	1
Bones of hand	1
Ribs	1
	—
	9
	—

Of the forty-two cases, thirteen died during 1920.

In each case a report on the housing conditions was made. Twenty-four defects were reported, and of these, eleven have been remedied.

In visiting and supervision, special attention is paid to the open cases, i.e., cases where tubercle bacilli are or have been found in the sputum.

Seventy-eight such cases (36 males and 42 females) were known to be living in the Borough during the whole or part of 1920. Nineteen died during the year, one left the country, and fifty-eight were living in the Borough at the end of December, 1920.

Of the thirty-six male cases, twenty-one were able to have a separate bedroom, five were able to have a separate bed with others in the room, and ten were unable to have a separate bed.

Of the forty-two female cases, eighteen were able to have a separate bedroom, twelve were able to have a separate bed, and twelve shared their bed with others.

Twenty-six of the seventy-eight open cases were in Hospital or Sanatorium during part of the year.

Thirty-seven of the cases were able to work during the whole or part of the year. Forty-one cases were unfit for work during the whole of the time they were under supervision.

J. L. STEWART,

Consultant Tuberculosis Officer.

MATERNITY AND CHILD WELFARE.

The Notification of Births Act was adopted in Middleton in 1908. There is one Health Visitor, who gives her whole time to visiting the homes where births have occurred, and also visits children under school age, especially cases of measles. She also attends at the Child Welfare Centre, which is held on one afternoon in each week. Here the babies who attend are weighed, and advice is given to the mothers on general hygiene, dieting, etc. Children 1—5 years of age are also seen at this centre, and those with minor ailments are, if necessary, referred to the minor ailments clinic. During the period in which Smallpox was prevalent the meetings of the Child Welfare Centre were discontinued.

Enquiries are made by the Health Visitor into cases of still-birth and infant deaths; illegitimate children are frequently visited, and their attendance at the Child Welfare Centre is encouraged.

Notification of Births.

By doctors 240, by midwives 396, by parents 18, not notified 22. Total 676.

Of this number 334 were boys and 322 girls; in addition 20 were still-born.

Visits Paid by Health Visitor.

The total number of visits paid by the Health Visitor amounted to 3,172, and included 665 first visits, and 1,329 re-visits to babies born in 1920.

Infant Welfare Centre.

319 babies under 1 year of age, including 264 new cases made a total of 2,979 attendances during the year.

	No. of babies who attended.
For weighing and consultation	158
For weighing only	132
For consultation only	29

84 children between 1 and 5 years of age, including 25 new cases, made 384 attendances.

	No. of children (aged 1—5) who attended.
For weighing and consultation	16
For weighing only	34
For consultation only	31

Mode of Feeding.

The methods of feeding the newly-born babies visited in connection with the Notification of Births were:—523 babies were solely breast fed, 59 were bottle fed, and 44 were having both breast and bottle feeding.

Every opportunity was taken to emphasize to the mother the importance of breast feeding during the first eight or nine months of infancy.

SANITARY ADMINISTRATION.

1. Staff.

Sanitary Inspector	Mr. C. H. Norton.
Assistant to the Inspector	Mr. A. Edwards.*
Disinfector	Mr. A. Booth.
Health Visitor	Miss L. Green.
School Nurse	Mrs. Boardman.
Clerk	Miss Phillips.

* Resigned October, 1920.

2. Hospital Accommodation.

Under an agreement with the County Borough of Rochdale, cases of Scarlet Fever, Diphtheria, and Enteric Fever are received in the Marland Isolation Hospital. This institution is under the control of the Medical Officer of Health for Rochdale. The accommodation is sufficient for Middleton cases. During the last year 12 cases of Scarlet Fever and 17 cases of Diphtheria were removed to this hospital. The Chadderton, Royton, and Crompton Joint Board Hospital, which was established as a Smallpox Hospital, and to which Middleton also contributes, is at present used by the Lancashire County Council for Tuberculosis cases. During this occupation an agreement is in force with the Ashton-under-Lyne District Joint Smallpox Hospital Board for the reception of sporadic cases of Smallpox from Middleton. 81 cases of Smallpox were removed to hospital during last year.

3. Local Acts and Adoptive Acts in Force in Middleton.

Infectious Diseases (Prevention) Act, 1890.

Public Health Acts Amendment Act, 1890.

Notification of Births Act, 1907.

Infectious Diseases (Notification) Act, 1889, making Ophthalmia Neonatorum a notifiable disease.

Public Health Acts Amendment Act, 1907, Parts II and III, Sections 34 to 38, and 43 to 51; Parts IV, V, VI, Sections 79 and 81 of Part VII, Part VIII, and Sections 93 and 95 of Part X.

By-laws relating to:—

Offensive Trades.

New streets and buildings.

Water closets and waste-water closets.

New streets.

Houses let in lodgings.

Regulations relating to:—

Dairies, Cowsheds and Milkshops.

New Drains and Buildings.

4. **Bacteriological Examinations.**

The following is a statement of the specimens sent to the Public Health Laboratory in Manchester for examination:—

Blood for Typhoid Bacilli: 1 negative.

Swabs for Diphtheria Bacilli: 14 negative and 7 positive.

Sputum for Tubercle Bacilli: 1 negative and 1 positive.

Milk for Bacteriological examination, 10 samples.

Hair for report on presence of ringworm spores, 25 samples.

HOUSING.

1. General Housing Conditions in the District.

(1) There are approximately 6,000 working-class dwelling-houses in the Borough, and speaking generally the structural character of the majority is fairly good; there are very few back-to-back houses.

(2) There is no indication at present of the contemplated establishment of important new works or factories in the Borough which would lead to an unusual increase in the working-class population in the immediate future.

(3) Shortage of Houses.

There is a shortage of houses for the working classes in the Borough, occasioned by the diminution in building by private enterprise within recent years.

To provide for this need the Council has prepared schemes in four parts of the Borough to build 362 houses.

Mr. Percy Harrison, M.Inst., M. & C. E., the Borough Surveyor finds that during the years 1900-1914 the approximate average number of houses built was 100 per annum, and that during the years 1915 to the beginning of 1921 the average number of houses erected or commenced was 10 per annum. Accordingly, he estimates that there was an average deficiency of 90 houses per annum for 7 years, or a total of 630 houses.

He informs me that the numbers of houses proposed to be built are as follows:—

	Houses.
Boarshaw Scheme (North Side)	128
Boarshaw Scheme (South Side)	110
Rhodes Scheme	58
Tonge Scheme	20
Middleton Junction Scheme	46
<hr/>	
Total ...	362

The Housing Committee have spent a great deal of time during the year in considering those schemes, but their work has not yet come to full fruition owing to the very great cost of building operations at the present time. On 31st December, 1920, the position reached was that all the plans had been approved. The schemes for street making and sewer-ing had been approved, and the full number of house plans

had been approved by the Ministry of Health. Work had not been begun owing to the fact that the Ministry considered the tenders were too high.

In addition to the above-mentioned municipal schemes, the Alkrington Tenants' Housing Scheme comprised plans which were approved for 100 houses.

Private Building Subsidy Certificates were issued in respect of 18 houses during the year, and most of these have been commenced.

II. Overcrowding occurs in almost all parts of the Borough, and is caused by the lack of empty houses and the cessation of private building. Parents with increasing families cannot obtain larger houses, and also many newly-married couples have to live as lodgers in the houses of others.

It has not been possible to do very much to deal with the overcrowding owing to the fact that houses have not yet been erected under the Housing Schemes.

III. Fitness of Houses.

The structural character of the majority of houses in the Borough is fairly good.

In some instances reconstruction or demolition of houses may be necessary owing to the position in which they have been built which renders them obstructive.

The principal defects are absence of through ventilation, insufficient air space around houses, and absence of adequate paving around houses.

(2) Dilapidations and insanitary conditions found in connection with houses have been dealt with under the Public Health Acts.

Conditions so far as they affect housing, as regards water supply, closet accommodation, and refuse disposal. There is a constant supply of good water furnished by the Heywood and Middleton Water Board.

The more important parts of the Borough are sewered, and in a large proportion of the houses water closets are installed. House refuse is removed by the Corporation vehicles once a week and taken to the Destructor where it is burned.

In the new houses to be erected by the Council all these conditions can be realized.

IV. No action has been taken as regards unhealthy areas.

V. By-laws.

The following are in force:—

By-laws relating to New Streets and Buildings allowed by the Local Government Board on 3rd May, 1895.

By-laws with respect to New Streets made 7th December, 1904, and confirmed by the Local Government Board on 10th October, 1905.

By-laws with respect to houses let in lodgings, made 7th April, 1909, and confirmed by the Local Government Board on 5th June, 1909.

VI. House-to-House Inspection.

Insanitary conditions found have been dealt with under the Public Health Acts.

STATISTICS FOR YEAR ENDED 31st DEC., 1920.

I. Population—

Census 1901	25,178
Census 1911	27,983
Estimated 1920 (Registrar General)	28,820
2. General Death-rate	12.3
3. Death-rate from Tuberculosis	1.2
4. Infantile Mortality	90.0
5. Number of Dwelling-houses of all classes	7,092
6. Number of Working-class Dwelling-houses ...	6,000
7. Number of new Working-class Houses erected	0

UNFIT DWELLING-HOUSES.

I. Inspection—

(1) Total number of Dwelling-houses inspected for housing defects (under Public Health or Housing Acts)	None
(2) Number of Dwelling-houses inspected under Housing Regulations	None
(3) Number of Dwelling-houses found to be unfit for human habitation	None
(4) Number of Dwelling-houses not in all respects fit	None

II. Remedy of Defects—

Number of Defective Dwelling-houses rendered fit in consequence of informal action by the Local Authority or their officers	—
---	---

III. Action under Statutory Powers—

A. Proceedings under S. 28 Housing, Town Planning Act, 1919:

(1) Number of Dwelling-houses in respect of which notices were served requiring repairs	—
(2) Number of Dwelling-houses which were rendered fit	—
(3) Number of Dwelling-houses in which Closing Orders became operative	—
B. Proceedings under Public Health Acts:	
(1) Number of Dwelling-houses in respect of which notices were served requiring defects to be remedied	310
(2) Number of Dwelling-houses in which defects were remedied	268
C. Proceedings under Sections 17 and 18 of the Housing, Town Planning Act, 1909	

Inspection of Factories, Workshops and Workplaces.

Premises.	Inspections.	Number of Written Notices.	Prosecutions.
Factories	57	6	nil
Workshops	108	nil	nil
Workplaces	—	—	—
Total ...	165	6	—

Defects found in Factories, Workshops and Workplaces.

Particulars.	Number of Defects.			No. of Prosecutions
	Found.	Remedied.	Referred to H.M. Inspector.	
Nuisances under the Public Health Acts:—				
Want of Cleanliness	—	—	—	—
Want of Ventilation	—	—	—	—
Overcrowding	—	—	—	—
Want of drainage of floors	—	—	—	—
Other Nuisances	1	1	—	—
Sanitary Accommodation				
Insufficient	—	—	—	—
Unsuitable or defective	4	—	—	—
Not separate for sexes	1	—	—	—
Total ...	6	1	—	—

Other Matters.

Class.	Number
Matters notified to H.M. Inspector of Factories:—	
Failure to affix Abstract of the Factory and Workshop Acts (S. 133, 1901)	nil
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshops Acts (S. 5, 1901)	
Notified by H.M. Inspector	6
Reports (of action taken) sent to H.M. Inspector	4
complied with notices	
Underground Bakehouses (S. 101) in use at the end of year	none

APPENDIX.

SPECIAL REPORT ON THE SMALLPOX OUTBREAK IN MIDDLETON

JULY TO NOVEMBER, 1920.

SMALLPOX OUTBREAK IN 1920.

During the year, 83 cases of Smallpox occurred in the Borough, this being the largest number recorded in any outbreak in Middleton.

All the cases recovered completely, by far the majority suffering from a very mild type of the disease. 81 patients were removed to hospital for isolation and treatment, and 2 passed through the disease at home before their illness was recognised as being Smallpox.

GENERAL STATEMENT ON THE COURSE OF THE OUTBREAK.

The first case was a half-time worker in a cotton mill, who took ill in July. The nature of her illness was not recognised until two other cases occurred in her family, about a fortnight later. This little group was dealt with, and a period of six weeks then elapsed before any other cases were reported. Two cases now developed, a young man and a young woman, who worked in cotton mills; both of these were removed to Hospital in the week ending October 9th.

Within the next few days a crop of cases occurred amongst the children attending one of the Public Elementary Schools, one classroom being particularly affected. Examination of the children in school revealed the presence in this class of a child suffering from Smallpox of some three weeks duration, and still in an infectious condition.

By this time it became apparent that there was the possibility of a serious outbreak of Smallpox in the Borough, and it became necessary to prepare the Hospital at Racefield for the accommodation of the patients. The question of school closure was given very careful consideration, and after

weighing up the advantages and disadvantages of this proceeding it was decided to close Durnford Street and the Rhodes Schools on October 18th, and all the other schools in the Borough on October 19th.

During the week ending October 16th 25 cases were removed to Hospital, most of them being school children who had been infected from the child mentioned above who was attending school while suffering from Smallpox.

During the next fortnight 23 more cases were admitted to Hospital.

At the end of October the Racefield Hospital was nearing the limit of its available accommodation, and accordingly emergency arrangements were made for the Manchester Smallpox Hospital to be opened to receive Middleton cases, while temporary buildings were being erected at Racefield.

Twenty-five additional cases were discovered during the next three weeks, and of these 17 were sent to the Manchester Hospital.

The people of Middleton had by this time responded so well to the appeal to seek the protection afforded by vaccination and re-vaccination that it was felt that the outbreak was definitely waning and that little further trouble might be anticipated except possibly from odd cases.

The last case was notified and removed to Hospital on November 26th. By the 31st December all the patients had recovered from their illness and had returned home, with the exception of one man, who was discharged on January 10th, 1921.

NOTIFICATIONS OF SMALLPOX WEEK BY WEEK.

Week ending	August 21st	.....	2 cases
"	October 9th	.....	2 "
"	October 16th	.....	25 "

„	October 23rd	.....	6	„
„	October 30th	.....	17	„
„	November 6th	.....	12	„
„	November 13th	.....	3	„
„	November 20th	.....	10	„
„	November 27th	.....	5	„

CLINICAL FEATURES OF THE OUTBREAK.

The type of disease in the vast majority of the cases was of the very mildest.

A definite history of an acute onset, usually with vomiting, headache, and fever, was obtained in nearly every case; the rash usually developed on the fourth day.

A very notable feature was that so many cases occurred amongst unvaccinated children, and yet the illness was of the very mildest type.

The rash was especially prone to pass through all its stages very rapidly, the lesion tending to be superficial and soon reaching the stage of pustulation. Several of the cases were diagnosed very early with very scanty rash, and subsequent observation in Hospital showed the development of many more spots.

Of the total cases two-thirds were females, and almost the same proportion were under 15 years of age.

Vaccination if performed in time was a complete prevention of Smallpox, and in some instances where it was performed after exposure to the disease it appeared to modify the subsequent attack.

Vaccination performed after the appearance of the rash or during convalescence was unsuccessful as a rule.

GROUPING OF CASES.

With the exception of a few persons, the source of origin of whose illness was not definitely ascertained, all the cases may be placed in five groups; and 4 foci of infection gave rise directly or indirectly to almost the whole of the cases. These groups are as follows:—

Group I.—A.A. and 2 relatives whom she infected.

„ II.—A.R. and 23 (or possibly 26) whom she infected.

„ III.—W.W. and 5 relatives whom she infected.

„ IV.—E.M. and 3 relatives whom she infected.

„ V.—Consisting of 35 persons whose sources of infection were the 23 (or 26) persons infected in Group II, and therefore indirectly were due to A.R.

FOCI OF INFECTION.

Initials.	Sex.	Age.	Date of onset.	Remarks.
A.A.	F.	13	July 24th.	Infected her mother and her brother, but no other cases were traced to this family.
A.R.	F.	10	Sept. 16th.	Infected 7 boys, aged 8—12 years; 13 females, aged 7—13 years; 3 females, aged 25—61 years. Also possibly 1 boy, aged 7 years; and 2 girls, aged 5 and 8 years.

Initials.	Sex.	Age.	Date of onset.	Remarks.
				In addition the 35 persons included in Group V acquired the disease from these 23 (or 26) patients and are thus attributed indirectly to A.R.
W.W.	F.	17	Sept. 28th.	Infected 5 relatives living in same house, and possibly one other case which gave rise to 2 others.
E.M.	F.	2 $\frac{1}{2}$	About Dec. 6th.	Infected 3 relatives living in the same house, and possibly 4 others.

SEX AND AGE DISTRIBUTION.

The sexes were unequally affected by the disease, of a total of 83 cases 26 being males and 57 females. The following table shows the age groups of the patients.

	1-5	5-10	10-15	15-20	20-30	30-40	40-50	50-60	60-70
Males	0	6	8	3	0	0	5	2	2
Females	3	17	18	3	4	3	6	1	2

The youngest patient was 2 $\frac{1}{2}$ years old, and the oldest was 69, the former having but a mild attack, and the latter, though he was infected from a slight case, suffering from a severe attack, in which haemorrhages developed in his pustules.

A baby of 14 months who was removed with her mother to hospital, the latter suffering from Smallpox, spent 6 weeks

very happily in a ward with 12 other cases of Smallpox, and did not herself acquire the disease, having been efficiently vaccinated prior to admission to hospital.

Vaccinal state of the patients prior to the outbreak of Smallpox :—

Not vaccinated	65
Vaccinated in infancy only ...	17
No evidence of vaccination ...	1 aged 39 years

Ages of the 17 persons who, prior to this outbreak, had been vaccinated in infancy only :—

Years	1-10	10-15	15-20	20-30	30-40	40-50	50-60	60-70
	0	1	1	0	1	8	3	3

It is recognised that the protective value of vaccination tends to disappear after about 7—10 years.

One child of 11 years of age, and one of 15 years, had not been vaccinated since infancy. The other 15 patients had not been vaccinated since infancy and were over 30 years of age.

Unvaccinated.—Of the 65 unvaccinated prior to the outbreak 15 were vaccinated after exposure to the disease. Though the operation was performed too late to prevent Smallpox completely, it was found that the attack was modified very considerably, in some cases the disease being of an aborted type.

HOUSES IN WHICH CASES OCCURRED.

The total number of houses in which cases of Smallpox occurred was 45.

In 26 houses only one case occurred.

In 8 „ two cases „

In 7 "	three "	"
In 2 "	four "	"
In 2 "	six "	"

OTHER OCCUPANTS OF INFECTED HOUSES.

The total number of other occupants of houses in which cases of Smallpox occurred was 206, of whom 32, or 15.5 per cent., subsequently developed the disease.

VACCINAL STATE OF OTHER OCCUPANTS OF INFECTED HOUSES.

The vaccinal state of other inmates of houses in which cases of Smallpox occurred was as follows, prior to the occurrence of the first case:—

Never vaccinated	68
Vaccinated but not during the last 7 years	99
Vaccinated or re-vaccinated within the last 7 years	34
No definite evidence.....	5
	—
Total ...	206
	—

Of these groups of persons the subsequent history was as follows:—The 68 unvaccinated persons were strongly urged to accept vaccination immediately, with the result that 33 were vaccinated within 3 days of exposure to infection, 26 others needed much more persuasion and were vaccinated at a later period than 3 days after exposure, while 9 refused to be vaccinated at all.

	Number	Subseq'nly developed Smallpox.	Per-cent-age
Vaccinated within 3 days ...	33	2	6
Vaccinated later than 3 days	26	11	42
Refused vaccination	9	9	100

The 99 other occupants of infected houses who had been vaccinated but not within the last 7 years were advised to be re-vaccinated. They responded as follows:—48 were re-vaccinated within 3 days of exposure to infection; 32 others were re-vaccinated later than 3 days after exposure; and the remaining 19 refused to be re-vaccinated.

	Number	Developed Smallpox	Per- centage
Re-vaccinated within 3 days	19	0	—
Re-vaccinated later than 3 „	32	4	12
Refused to be re-vaccinated...	48	5	26

The other occupants of infected houses who had been vaccinated, or re-vaccinated within the last 7 years, numbered 34. Not one of them developed Smallpox. They included a number of ex-Service men.

Of the 5 persons in whose case there was no definite evidence of vaccination, 3 refused to be vaccinated, and one of them subsequently developed Smallpox.

The other 2 were vaccinated successfully, and did not contract Smallpox.

MEANS EMPLOYED TO COMBAT THE OUTBREAK.

In every case careful enquiries were made as to the other inmates of the house, and the movements of the patient during the few days preceding the onset of his illness. A list of the persons with whom the patient had been in contact was prepared, and these were all visited (if living in the Borough) and were, together with the inmates of the infected house, urged to be vaccinated, or re-vaccinated, without delay.

As far as the patient was concerned, as soon as the diagnosis was established he was removed to hospital. Disinfection of the premises and of all infected articles was carried out, and all contacts were kept under observation for a period of a fortnight. In the great majority of the cases all the other inmates of infected houses were kept off work, but this was not necessary and was not required in some instances. Where the workers remained away from work during this observation period the Council provided food, without cost, for the whole household.

Vaccination.

Dr. Milne, the Public Vaccinator, paid visits to the houses to offer vaccination free to contacts, and in this way, and also at his surgery, vaccinated 1,643 persons.

Two temporary vaccination stations were also opened, one in Rhodes, and one at Middleton Junction.

Dr. Findlay, the Certifying Factory Inspector, visited all the Factories and Mills and offered vaccination to the workpeople. The general practitioners in Middleton vaccinated over 1,000 other persons.

In addition, 1,167 persons were vaccinated in the Medical Officer of Health Department under the Public Health (Smallpox Prevention) Regulations, 1917.

There were thus 2,810 vaccinations performed by the Public Vaccinator, and in the Medical Officer of Health's Department, and it is estimated that 1,600 other persons were vaccinated by general practitioners and in the factories, and at the temporary vaccination stations.

Removal to Hospital.

All cases were removed to Hospital as speedily as possible, but there was a slight delay before the Racefield Hospital was opened.

Of the 81 cases removed to Hospital 12 were treated at the Ashton and District Hospital, Hartshead Pike; 17 at the Manchester Smallpox Hospital, Clayton Vale, and all the remainder at Racefield Hospital, Chadderton.

Ambulance.

For the removal of the early cases the horse drawn Ambulance belonging to the Corporation was used, but later on when the number of cases increased rapidly it became necessary to use motor transport.

Accordingly the body of an ordinary ambulance was fitted on to a Ford chassis, and this gave a very satisfactory and useful vehicle, saving much time in transit, and being quite comfortable for the patients.

Other measures taken to prevent the spread of infection.

School Closure.

All the Elementary Schools in the Borough and also the Secondary School were closed on October 18th and 19th, and remained closed until the end of the year.

All the Sunday Schools were closed voluntarily.

Public meetings and social gatherings were postponed, also the observance of Mayoral Sunday.

Propaganda.

By the employment of Posters, Handbills, and Notices in the local Press very successful efforts were made to persuade the general public to seek the protection which is obtained by vaccination. In addition the Editor printed information on the disease, and devoted space in his newspaper each week to a description of the progress of the epidemic which was of great value in informing the public.

STAFF AVAILABLE FOR DEALING WITH THE OUTBREAK.

When the first cases of Smallpox were discovered the only staff of the Sanitary Department consisted of the Medical Officer of Health, the Sanitary Inspector, the Disinfecter, and the Clerk, who gave half her time to work under the Health Committee.

The first three cases of the disease were dealt with successfully by this staff, and subsequently when other cases occurred, although the most rigid inquiries were made, no possible infection could be traced between this family and any later cases.

On and after the 9th October when the cases were discovered in numbers it was quite evident that such a small staff was scarcely able even to remove the patients to Hospital and carry out disinfection of premises. Full inquiries could not be made and no preventive measures undertaken. Under these circumstances Dr. Niven, Medical Officer of Health of Manchester, and Dr. Butterworth, the County Medical Officer, with the sanction of their authorities, very kindly sent a staff of highly qualified and very experienced officers to work temporarily in Middleton, these including doctors, sanitary inspectors, nurses, and clerks from the staff of the County, and three Sanitary Inspectors from Manchester. The value of the work performed by the medical officers, inspectors, and nurses was quite evident to the general public, as much of it was done in the homes of the patients and their friends.

In order that the efforts should be co-ordinated, and that there should be no overlapping, or loss of efficiency, a vast amount of clerical work was also necessary, which could only be performed by skilled clerks. This was a very important part of the campaign and deserves to be given its due weight.

I should like here to express the sense of my obligation to Dr. Butterworth, the County Medical Officer, for spon-

taneously coming to my assistance and providing very quickly a temporary staff of experienced workers. Especially should be mentioned the services rendered by Dr. Fisher, Chief Assistant Medical Officer, Lancashire County Council, whose great experience of infectious diseases was available and was freely drawn upon throughout the course of the epidemic.

The whole of the temporary staff rendered very excellent service, and their efforts were much appreciated by the people of Middleton.

SUMMARY.

TYPE OF CASES.

The type of disease was the so-called American or Western type, and produced many mild specimens of the disease. One case was haemorrhagic. There were no fatal cases.

NUMBER OF CASES.

Eighty-three cases of Smallpox were discovered, but there are good reasons to believe that other cases occurred in the Borough which were not recognised.

OCCUPATION.

Most of the cases occurred in children. Some of the workers were engaged in cotton mills, but this is of no significance in view of the great number of persons employed in this industry.

There was no evidence which could in any way implicate cotton as being the source of the outbreak.

AGE AND SEX.

There were 52 children under 15 years of age, and 18 persons of 40 years and upwards.

Of the cases 57 were females and 26 males.

STATE AS TO VACCINATION.

Out of a total of 83 patients 65 were unvaccinated and 18 showed no evidence of vaccination. Of the 17 previously vaccinated 15 had been vaccinated over 30 years before, and 2 had been vaccinated 11 years, and 1 15 years previously.

SOURCE OF INFECTION.

Probably the origin of the outbreak was a mild unrecognised case of Smallpox.

It was ascertained that two of the Middleton cases were accustomed to frequent a neighbouring district, and possibly they acquired their illness from cases which occurred in that district.

The great majority of the subsequent cases were traced directly or indirectly to an unrecognised case in a school girl of 10 years, who was attending school in a highly infectious condition.

MEASURES TAKEN TO PREVENT SPREAD OF INFECTION.

Cases were removed to Hospital as speedily as possible.

Contacts were, if possible, persuaded to be vaccinated, and were kept under observation for 14-18 days. Contacts living outside the Borough were notified to the local Medical Officer of Health.

All the Schools in the Borough were closed.

Sunday Schools were voluntarily closed and most meetings of a social character were postponed.

In three families where attempts were made to conceal Smallpox cases, the father, as being the head of the family, was prosecuted for failing to notify. A fine was inflicted in each case.

Posters and Handbills were employed to advocate general vaccination of the public.

Temporary Vaccination Stations were opened.

Children under 14 years of age were refused admission to the local Picture Houses.

Borough of Middleton,

Sanitary Department,

Corporation Street,

Middleton.

Sanitary Inspector's Annual Report for the year ended
31st December, 1920.

To the Chairman and Members of the Health Committee.

Gentlemen,—

I have very much pleasure in presenting my Twenty-Fifth Annual Report on the work carried out by the Sanitary Department during the year 1920.

There has been a large number of nuisances dealt with and abated. There are still a goodly number of repairs to either the Dwelling-houses or the Outbuildings which require attention.

The Borough is in a very fair sanitary condition, there being no slums, privies only connected with farms, and very few pail closets where there is a sewer available, still circumstances keep arising which call for attention, and where property owners fail to make the necessary repairs then Notices have to be served and the necessary action taken to see that dwellings are kept in proper repair and that the inhabitants are not inconvenienced or suffer from any defects which are dangerous to health or a nuisance.

In carrying out the duties of the department I beg to acknowledge the able assistance received from Arthur Edwards, who was Assistant Inspector up to the 21st August when he went to a similar position in the city of Manchester,

but returned for a time to assist with the epidemic of Small-pox. Also of Alfred Booth, who has carried out the duties of Nightsoil Foreman and Disinfector; also to those men engaged in the removal of ashes and withdrawn to assist with the disinfection and other duties whilst the epidemic lasted.

I beg to tender my sincere thanks to the Chairmen, Vice-Chairmen, and members of the various Committees it is my privilege to serve, for their kindness and support in carrying out the duties of the department during the year.

I remain,

Yours faithfully,

CHARLES HY. NORTON,

Sanitary Inspector.

**SUMMARY OF WORK DONE DURING THE YEAR
1920.**

Formal Notices served under the Public Health Act, 1875	30
Number of Preliminary Notices served re nuisances	422
Number of Nuisances found	511
Number of Smoke Observations taken	73
Samples of Food taken for analysis	52
Amount of Diseased, Unsound and Unwholesome Food seized	1,975 lbs.
Number of Canal Boats inspected	28
Cases of Infectious Disease reported	176
Patients removed to Hospital for isolation	108
Number of Rooms disinfected	670
Articles of Bedding, Clothing, etc., disinfected ...	1593
Visits to Cases of infectious disease	537
,, Slaughter Houses	319
,, Common Lodging Houses	488
,, Dairies and Cowsheds	117
,, Factories	57
,, Workshops	108

NUISANCES FOUND DURING THE YEAR 1920.

Defective downspouts	31
Defective eaves gutters	45
Defective drains	8
Defective trap	1
Defective water closet cisterns	22
Defective water closet service pipes	6
Defective water closet pedestals	2
Defective water closet roof	2
Defective waste water closet tippers	4
Defective closet seat	1
Defective closet walls	2
Defective waste pipes	17
Defective ashbins	13
Defective ashpit doors	3
Defective dwelling-house roofs	22
Defective ceilings	10
Defective wall plaster	19
Defective floors	2
Defective bedroom walls	3
Defective bedroom floors	10
Defective window frames	3
Defective skylights	2
Defective fire range	1
Defective door easings	3
Defective chimney	1
Defective backyards	2
Defective ventilation shafts	2
Defective channels	2
Defective soil pipe	1
Defective sanitary can	1
Defective wash boiler	1
Fast windows	2

Choked drains	45
Choked water closets	16
Choked waste water closets	53
Choked downspouts	6
Choked waste pipes	1
Choked soil pipes	1
No flush to water closet	2
Closets without doors and fastenings	32
Dangerous closet walls	8
No seat to water closet	1
No closet for females	1
Dirty water closets	2
Foul water closets	2
Damp bedroom walls	17
Damp living room walls	20
No ventilation between workroom and w.c.	1
Insufficient ashpit accommodation	5
Ashpits without doors	12
Ashpits without roof	1
Foul ashpits	2
Dirty dwelling-houses	6
Stagnant water in cellar	4
Untrapped drains	3
Dangerous backyard walls	2
No water supply	1
Dirty backyards	2
No downspout	4
Offensive manure heaps	4
Accumulation of refuse	3
Offensive urinal	1
Sewage in backyard	1
Damp floors	3
Dangerous house chimneys	3
Broken window cords	2

NUISANCES ABATED DURING THE YEAR 1920.

Defective downspouts	18	Choked W.C.'s	11
Defective eavesgutter ..	28	Choked soil pipe	1
Defective back door ..	2	Walls pointed	1
Defective plaster	10	Walls damp	5
Defective waste pipe..	16	Water supply	1
Defective cellar floor ..	1	Lead flashing to chim-	
Defective backyard ..	3	ney	1
Defective drains	8	Dirty houses	5
Defective window		Dirty lodging-house ...	1
frames	5	Dirty W.C.	3
Defective floors	2	Dirty backyard	2
Defective bedroom		Offensive urinal	2
floors	6	Offensive manure heap	4
Defective roof	16	Drains trapped	4
Defective Ashbins	9	Water in cellar	3
Defective closet roof...	2	No water supply	1
Defective W.C. cistern	21	Accumulation of refuse	1
Defective W.C. service		Ashpit accommodation	4
pipe	5	Ashpit doors	6
Defective W.C. joint...	3	Ashpit doors provided	4
Defective closet seat...	1	Dangerous yard wall...	3
Defective sanitary can	1	Dangerous closet wall	3
Defective W.C. tipper	2	Dangerous closet	1
Defective W.C. pedes-		Ashbins provided	3
tal	1	Closet pails provided...	2
Defective Ventilation		Closet doors provided..	1
shaft	1	Closet seat provided...	1
Defective soil pipe ...	1	Stagnant water	1
Defective channel	1	Vegetable refuse	1
Defective kitchen wall.	1	Damp bedrooms	2
Defective bedroom wall	2	Damp rooms	22
Defective closet wall...	3	Window made to open	1
Defective house wall...	2	Window cords	2
Defective gable wall ...	1	Flush to W.C.	4
Defective skylight	1	Foul W.C.'s	2

Defective kitchen floor	1	Insufficient flush to	
Defective door casings	3	W.C.	2
Defective washing		Damp proof course	
boiler	1	provided	1
Choked downspouts ...	9	Downspouts provided .	1
Choked drains	36	Alteration of ventilat-	
Choked W. W.C.'s ...	49	ing shaft	1
Choked waste pipe ...	1	Smoky chimney	1

NUISANCES UNABATED.

Defective window		Damp house	2
frame	1	Damp gable wall	2
Defective bedroom		Choked water closet ...	5
floors	4	Choked drain	1
Defective roofs	6	Females' closets with-	
Defective ceilings	3	out doors (Factory)	3
Defective plaster	5	Females, no closets for	1
Defective fire range ...	1	No space between	
Defective downspouts .	6	closet and workroom	1
Defective W.C. cisterns	3	Insufficient flush to	
Defective sanitary can	1	W.C.	2
Defective sink waste		Insufficient water sup-	
pipe	3	ply	1
Defective washing boiler	1	Insufficient ashpit ac-	
Defective waste water		commodation	3
channel	1	Ashpit without door...	1
Defective ashbin	2	Closet without door...	1
Defective skylight and		Broken closet basin ...	1
flashing	1	Leaky roof	1
Defective and danger-		No downspout con-	
ous chimney	3	nected to eavesgutter	3
Defective tipper	1	Dangerous walls	1
Defective joints	1	Dirty dwelling-house...	1
Defective service pipe.	1	Accumulation of refuse	1
		Broken window cords.	2
		Tip on fire	1

Defective closet seat ...	1	Sanitary cans	12
Defective gully trap ...	1	—	—
Defective eavesgutter ..	7		103
Damp bedrooms	3		—
Damp walls	1		—

Four hundred and twenty-two preliminary notices have been served upon the persons responsible for the nuisances arising from the foregoing causes.

In twenty-one cases it was necessary to report the parties responsible for the nuisance to the Health Committee, and ask for Formal Notices to be served upon the responsible parties. In each case reported, instructions were given for the Notices to be served, and in eighteen instances they were complied with.

Some of the nuisances were abated in compliance with Notices served during the year 1919.

It has not been necessary to resort to legal proceedings in order to obtain the abatement of any of the nuisances reported.

Twenty-two sanitary can closets have been converted to closets on the water carriage system. This has improved the sanitary condition of the houses concerned and will reduce the number of sanitary pails to be dealt with. There are now very few pail closets remaining where there is a sewer available, and many of them might with advantage be converted during the year 1921.

You will notice that a large number of water and waste water closets have required attention owing to being choked. This is often due to the carelessness of the tenant, especially in the case of waste water closets, as they are generally choked by old tins, rags, sticks, and other debris being dropped down the pedestal and choking the drain. The slop

water closet is not looked upon as being a hygienic closet, but by the misuse or indifference of the occupier it becomes choked, the refuse accumulates in the pedestal, and sewage overflowing into the backyards makes matters much worse, and this being the tenants' neglect I am of opinion that they should be held responsible and made to pay for the opening and repair of the drain. If this were done I think that more care would be taken of the closets and less complaints of chokeage would be received.

It would be a great advantage and a saving of much time if those who carry out the work in complying with notices would give notice at this office when commencing the work so that it could be inspected and passed when completed.

The giving of notice is compulsory in the case of altering or repairing of drains, whether notice has been served or not, but I don't think this is always done. In one case I had seen the drain open and refused to pass it, but later found the drain had been covered in without being passed. The offender was brought before your Committee and cautioned against a repetition of the offence.

INFECTIOUS DISEASE.

One hundred and seventy-six cases of infectious disease have been reported, which includes eighty-two cases of Smallpox. This is the largest number of cases which have occurred in the Borough in any one year for a long time.

The cases reported were forty-nine Scarlet Fever, eighty-two Smallpox, forty Diphtheria, one Enteric Fever, and four of Erysipelas.

Eight patients suffering from Scarlet Fever, eighty-two from Smallpox, seventeen Diphtheria, and one from Enteric Fever were removed to Hospital for isolation.

All the cases were investigated by this department, and the necessary steps taken to prevent the disease spreading.

The number of cases of Scarlet Fever is not excessive for a district the size of Middleton.

The number of cases of Diphtheria show an increase of five over the previous year. These cases occurred in various parts of the Borough, and although every effort was made to trace the origin of the disease in no case was it possible to trace the disease to contact with a previous case.

The Borough has been remarkably free from Enteric Fever, only one case being reported, and it is to be hoped that freedom from this disease will continue.

On Saturday, the 21st August, two cases of Smallpox were reported. Both the patients resided in the same house. They were at once taken to Heartshead Hospital for isolation and treatment, the house disinfected, and the remaining members of the family were kept isolated, as far as possible, and all persons known to have been in contact with the patients were visited and kept under observation.

The efforts put forth were successful, and no further cases occurred at this time.

This being the Wakes Holidays many of the contacts could not be seen as they had gone away on holiday.

On the 2nd of October a further case of Smallpox was reported at Rhodes. This patient was dealt with, but the precautions taken in this case were not successful in preventing the spread of the disease, as other members of the family were attacked, and it spread to other houses in the neighbourhood, and also to Higher Wood-street, Top of Middleton, Taylor Street, Allison Street, Manchester New Road, Manchester Old Road, Factory Street, and lastly, to Middleton Junction, where it was stamped out.

When it was seen that the disease was likely to spread three Manchester Sanitary Inspectors (Messrs. Isaac Priestley, John E. Lord and Arthur Edwards), the latter only having been left here about six weeks, came to help, and did good service. Later four of the County Council's Inspectors also came in the district, and remained until the epidemic was over. There was also John Wm. Coucher, a disabled soldier, qualifying for a Sanitary Inspector, who also rendered good service.

Ten of the patients of the second outbreak were removed to Hartshead Hospital, when at a most critical period of the epidemic it was closed to us, and for two days patients had to be left at home until the Hospital at Racefield, Chadderton, could be got ready for patients suffering from Smallpox. This two days was a most anxious time, for little could be done to stem the spread of the disease during this period, and both patients for removal and the disinfection fell sadly behind.

On Thursday, the 14th October, there were thirteen patients taken to Racefield and five the following day, and the work of fetching up the arrears of disinfection was begun. Owing to the accumulation of disinfection and the importance of carrying it out as quickly as possible, it was necessary to employ additional men for all this work. I got three of the men employed in removing ashes to assist in this work, and the whole of the bedding and houses were disinfected by 10 o'clock on the Sunday night.

Notwithstanding the danger of contracting the disease themselves, these men on several occasions worked week-ends and late at night assisting with the disinfection of both houses, and infected bedding, and doing whatever was required of them to stamp out this dreaded disease.

Owing to Racefield Hospital becoming full it was necessary to take eighteen patients to Clayton Vale Hospital, be-

longing to the City of Manchester. A motor ambulance was provided and the work of removing patients was carried out very quickly.

In two or three instances there was carelessness and indifference about spreading the disease, and in two cases the responsible parties were summoned, and fined for not notifying the presence of the disease in their houses.

I have prepared a tabular statement of all the outbreaks of Smallpox which have occurred in the Borough during the last twenty-six years, from which you will see that this is the biggest epidemic in this Borough of which there is any record.

The outbreaks in the years 1894 and 1895 were dealt with by my predecessor with this exception. I have dealt with every patient in the Borough who has been so unfortunate as to contract Smallpox since the 1st January, 1896.

SMALLPOX.

Number of cases of Smallpox which have occurred in the Borough of Middleton during the last twenty-six years.

Year.	Jan.	Feb.	Mar.	Apl.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1894	...	1	...	26	5	2	1	...	...	...	...	...	35
1895	...	...	...	...	...	...	2	...	1	1	...	...	4
1896	...	1	...	...	1	...	...	...	...	...	...	...	2
1900	...	...	...	...	6	7	2	...	...	...	...	...	15
1902	...	...	...	...	...	...	...	...	1	...	3	...	4
1903	3	3	9	6	5	3	...	...	...	...	...	1	30
1904	...	...	...	...	...	...	...	...	2	...	...	1	3
1905	3	2	...	...	...	2	2	...	...	1	1	...	13
1906	...	...	...	...	1	5	6	...	...	1	...	...	13
1909	...	...	...	1	...	...	...	...	...	...	...	...	1
1911	...	6	...	...	...	...	...	...	...	...	...	...	6
1920	...	...	...	...	...	...	...	2	...	50	30	...	82
Totals	6	13	11	33	17	18	13	4	4	51	35	3	208

DISINFECTION OF HOUSES, CLOTHING, ETC.

Six hundred and seventy rooms have been disinfected in consequence of having been occupied by persons suffering from a notifiable infectious disease.

One hundred and seventy-two rooms have been disinfected in consequence of having been occupied by patients suffering from tubercular disease.

One thousand five hundred and ninety-three articles of bedding, clothing, etc., have been disinfected in the steam disinfector, and in no case has complaint been received of any damage being done to any article dealt with.

SMOKE OBSERVATIONS.

During the year seventy-three smoke observations have been taken, and the aggregate amount of black smoke emitted was five hours twenty-four minutes and thirty seconds; moderate smoke twenty-two hours thirty-five minutes and fifty-five seconds, and for eight hours twenty-nine minutes and thirty-five seconds no smoke was emitted.

The average time black smoke was emitted was four minutes and twenty-six seconds.

The limit of five minutes emission of black smoke per half-hour has been exceeded on twenty-four occasions. Twelve of the offenders were summoned, and fines amounting to £7 15s. od. and £3 8s. od. costs, were inflicted by the magistrates.

In the remaining cases Formal Notices under the Public Health Act, 1875, were served upon the offenders. Six of the Formal Notices were complied with and the remainder were summoned for not complying with the Notices and Orders to abate the nuisance and prohibiting its recurrence were made upon the offenders.

You will notice that the average amount of black smoke emitted is very high, which shows that the atmosphere in the Borough has not been as free from impurities as formerly, which is to be regretted, and it is to be hoped that those who have charge or are in any way connected with steam raising plant will use their best endeavours to reduce the amount of black smoke emitted from their chimneys during the ensuing year, failing which it will be necessary to again resort to more unpleasant methods to obtain an atmosphere with impurities reduced to the lowest possible quantity, which is so essential to the health and cleanliness of the community.

I very much doubt whether this part of the duties receives the attention its importance upon health demands, and a district which carries out its duties in this direction may suffer very much from the smoke emitted in the district of a neighbouring authority which is very discouraging to those who carry out the duties imposed upon them by the Public Health Acts.

At the present time a Departmental Committee appointed by the Ministry of Health is holding an inquiry into this question, and it is to be hoped that one of the results will be the application of the law respecting black smoke in every district. Then I have no doubt we shall have a better and purer atmosphere throughout the country.

REMOVAL OF NIGHTSOIL, ASHES, AND CLINKERS.

Twenty-six thousand five hundred and forty-five sanitary pails have been emptied, and the number of loads were six hundred and twenty-four.

The cost of emptying pails was £451 12s. od., an increase of £53 7s. 11d. over the previous year.

Five thousand two hundred and sixteen loads of house refuse, weighing six thousand nine hundred and thirty-four tons fifteen hundredweight two quarters, has been removed,

which is an increase of six hundred and sixty-eight loads, weighing one thousand four hundred and twenty-eight tons eighteen hundredweight more than the quantity removed during the previous year.

Four thousand eight hundred and sixty-four loads, weighing six thousand five hundred and forty-seven tons fifteen hundredweight and two quarters have been taken to the Destructor, the remainder being taken to the Tips. Two thousand three hundred and ninety-one loads, weighing three thousand and eighty tons nine hundredweight one quarter, has been removed by the two motor wagons, and the remainder by horses and carts. This includes the refuse taken to the Tips, the weight of which has been estimated on the loads weighed and delivered at the Destructor. The cost of collection of the refuse is £2,074 5s. 1d., which is £28 12s. 3d. less than for the previous year.

Taking the number of houses as 6,758, the amount of refuse removed per house is one ton no hundredweights two quarters, an increase of four hundredweights one quarter per house.

The cost per ton for removal is 6s. 1d., which is 1½d. per ton less than for the previous year, and the cost per house is 6s. 1½d., which is nearly a 1d. per house less.

The two motor wagons have done good work during the year, and although they have had a number of misfortunes they have been very useful indeed.

Motor wagons cannot be worked to the best advantage when engaged in emptying ashbins and on short journeys, and this is avoided as far as possible, but there are times during the summer months when, in order to find them work, it is necessary to dispense with a horse and cart and put the motor wagon on this work.

You will notice that there has again been a considerable increase in the amount of refuse removed. Although there is very little increase in the number of houses, yet year by year the amount of refuse made keeps on increasing in large quantities. In the year 1918 there were 3,611 loads weighing 4,578 tons 18 cwts 2 qrs., which was 13 cwts 3 qrs. per house. In the year 1919 there were 5,505 tons 17 cwts 2 qrs. collected. This gives an average of 16 cwts 1 qr. per house, and during the year under review there has again been a big increase of refuse collected.

It is somewhat difficult to give a reason for this increase of refuse, but I think that the cold weather experienced during the summer months and the quality of coal being used will have had some influence upon the amount of refuse made.

The quantity and quality of the refuse is constantly changing, the greatest quantity and the best for burning in the Destructor coming from parts of the Borough where the people are least able to afford it. This refuse contains a large quantity of cinders, which, if sifted, could be utilised on the house fires, with benefit to the householder and less cost of removal by the Corporation.

A quantity of old tins, glass and paper recovered from the refuse has been sold for £153 11s. 7d., and a rebate of £10 6s. 3d. on petrol used by the motors.

There is a large quantity of refuse from the old brick-built ash pits, which has to be tipped on the streets, which is the cause of a temporary nuisance, being both unpleasant and unsightly. This is both laborious and costly to remove, as the refuse has to be filled into a barrow, wheeled down a passage, emptied on to the street, and filled into the carts.

In order to abolish this system it will be necessary to abolish these ash pits, many of them being very foul, and sub-

stitute portable galvanized iron bins, which can be carried and emptied into the carts right away without any tipping on the street.

One thousand eight hundred and forty-one loads of clinkers, weighing three thousand six hundred and eighty-six tons eighteen hundredweights three quarters, have been removed from the Destructor and carted to the Tip. The amount received for this work is £68 16s. od. The cost of collection of house refuse, burning it at the Destructor, and carting of clinkers to the Tip makes dealing with the refuse a very costly business, for which there is no return, and the only alternative to this is a system of salvage, and the sale of all useable material, such as cinders, glass, iron, rags, etc., which would be some return towards the expense incurred in dealing with house refuse.

FOOD AND DRUGS ACTS.

Fifty-two samples of food have been taken and submitted to the Public Analyst for analysis. The articles of food taken and analysed were thirty-four samples of milk, two butter, two sugar, four coffee, one pepper, one ground ginger, two baking powder, two mustard, one tea, two cream of tartar, and one margarine.

The samples of milk were taken officially, and divided into three parts, one part being given to the vendor. The samples of grocery were taken unofficially, and were not divided.

Three samples of milk were reported as not being genuine, two were deficient in fat to the extent of 28 per cent. and 18 per cent. respectively, and the other contained eight parts by volume of cow dung per one hundred thousand parts

The vendors of the samples reported not genuine were summoned. The cases against the vendors charged with de-

ficiency of fat were dismissed, and the vendor of the milk containing cow dung was fined £1.

In the cases of deficiency of milk fat, the vendors satisfied the magistrates that the milk was sold in the same condition as it came from the cow, hence the dismissal.

Only one sample of milk was reported as being dirty. This is a matter that can easily be avoided if farmers will only take the trouble to keep the cows clean, especially the udders. Some milk vendors appear to think that if the solid particles are removed by passing the milk through a fine sieve, everything is satisfactory. This is not so and very few, if any, people would knowingly partake of milk which had once contained cow dung. Therefore, in the interests of the consumers and for their own reputation, farmers ought to be exceedingly careful in keeping their cows clean so as to prevent cow dung or other dirt gaining access to the milk.

Farmers who neglect to take proper precautions to provide and supply clean milk are asking for unnecessary trouble, and sooner or later are certain to be caught and punished for this dirty offence.

It is to be hoped that the necessary standard of cleanliness of cattle and cowsheds will be attained by those responsible, and that this will be the last time any complaint of this character will be necessary in this Borough.

The food supply of the Borough is very satisfactory, and very free from adulteration, for although samples are taken at irregular intervals, it is only on rare occasions that an article of food is found to have been tampered with.

DAIRIES, COWSHEDS, AND MILKSHOPS ORDER.

One hundred and seventeen visits have been paid to the above. They were found to be kept in clean condition, but the drainage and ventilation still require improvement.

There is still the same reluctance on the part of cow-keepers to provide sufficient ventilation for the cattle during the time they are confined to the shippings, and in the few cases where some provision has been made I almost invariably find that the openings are stopped up with hay or straw and fresh air prevented from gaining an entrance so that the condition of the atmosphere may easily be imagined, and the unhealthy conditions under which the animals are kept.

There has been a great improvement during the last few years of cleanliness of the cattle, but the condition is not yet satisfactory, and it is to be hoped that cowkeepers will give more attention to keeping the cattle clean than has been the case in the past, for we can hardly expect a clean milk supply from dirty cows.

DISEASED, UNSOUND, & UNWHALESOME FOOD.

One thousand nine hundred and seventy-three pounds of diseased food has been seized during the year.

The articles seized were two whole carcases and parts of two other beasts, which, on slaughter, were found to have suffered from tuberculosis.

In each case I was sent for by the owners to examine the carcases, which were at once surrendered, so that it was not necessary for any further proceedings to be taken.

SLAUGHTER-HOUSES.

There are ten slaughter-houses in the Borough, to which three hundred and nineteen visits have been made.

They were found to be satisfactory.

COMMON LODGING-HOUSES.

Four hundred and eighty visits have been paid to the above, which were found to be kept clean, and were free from overcrowding and infectious disease.

FACTORY AND WORKSHOPS ACT.

One hundred and fifteen visits have been made to the factories, and one hundred and eight visits to workshops in the Borough.

Three firms were reported by H.M. Inspector of Factories for not having doors and fastenings to the closets, one firm for not having an intervening space open to the atmosphere between the water closet and the workroom, and another firm for not having sufficient closet accommodation for females.

Two firms have provided the necessary doors and fastenings, and the remainder are being dealt with.

All the workshops were clean and satisfactory.

SHOPS ACT.

There has not been any infringement detected or any complaints received respecting any infringement of the above Act.

CANAL BOATS ACTS AND REGULATIONS.

During the year twenty-eight canal boats have been inspected.

The cabins were registered for one hundred and twenty-seven persons, and occupied by fifty-seven men, seven women, and one child.

On two boats the certificates were not produced when asked for, one boat was not properly marked, and one had a dirty cabin. In each of these cases the owners were served with notices to remedy the defects.

The cabins were free from overcrowding and infectious disease.

CONTAGIOUS DISEASES (ANIMALS) ACTS.

Two horses belonging to one owner were found to be suffering from parasitic mange and were dealt with under the above Acts.

Both animals were isolated until free from disease, when the stable, harness, etc., were disinfected, and the animals allowed to work in the usual manner.

RIVERS.

There has been an improvement in the condition of the rivers flowing through the Borough, but there is plenty of room for further improvement, especially in the case of the river Wince, before they can be considered satisfactory.

HOUSING AND TOWN PLANNING ACT.

Owing to the shortage of dwelling-houses there has not been any action taken under the above Act.

Three houses which were condemned some time ago are still occupied, but the owner of two of them is taking steps to have them put in a satisfactory condition, but in the other case the owner has not taken any steps to make it reasonably fit for habitation.

One old house which has not been occupied for a great number of years has been renovated and made fit for habitation, and is now occupied.

Two beer houses which had been closed by the Licensing Justices have been converted and divided into four private houses.

There is still a shortage of houses, and this prevents any progress being made with alterations to houses which are not at present satisfactory.

RENT RESTRICTION ACT.

There were only four applications made under the above Act. In each case a certificate was given to the occupier stating the condition of the premises.

MARKET REPORT.

To the Chairman and Members of the Watch Committee.

Gentlemen,—

I beg to present the following report on the amount of money drawn from and the number of stalls which have occupied the Market Ground during the year ended 31st December, 1920:—

1920. Month	1919.			1919.			1919.		
	No. of stalls.	£. s. d.	No. of stalls.	£. s. d.	No. of stalls.	£. s. d.	No. of stalls.	£. s. d.	No. of stalls.
January	66	9 11 3	94	7 5 9	58	8 0 3	64	2 16 4	80
February	72	10 8 0	120	10 2 3	63	8 14 3	77	3 5 6	
March	76	11 1 6	141	11 7 6	84	12 0 11	80	3 13 10	
April	68	9 17 0	86	7 2 11	64	9 5 0	83	3 16 7	
May	87	12 11 9	181	13 13 9	72	10 7 6	135	8 0 6	
June	71	10 5 3	167	11 14 3	84	12 2 6	170	10 11 3	
July	72	10 8 0	142	10 18 0	70	10 2 6	136	11 6 9	
August	82	11 17 0	285	48 17 6	75	10 14 3	156	33 16 6	
September	67	9 14 3	202	17 3 9	82	11 17 5	115	8 17 10	
October	72	10 8 0	206	17 12 9	69	10 2 9	91	6 17 0	
November	91	13 3 0	286	25 19 3	71	10 5 3	106	8 1 3	
December	59	8 12 6	140	13 12 11	74	10 13 6	149	10 10 6	
Total	883	127 17 6	2050	195 10 7	866	124 6 1	1362	111 13 10	